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A nonuniform distribution of excision repair synthesis in nucleosome core DNA.	Lan, S Y; Smerdon, M J	Biochemistry (1985 Dec 17)	24 / 7771-83	PubMed Citat
A slot blot method for detection of ultraviolet photoproducts in DNA.	Liu, X; Smerdon, M J	Anal Biochem (1995 Aug 10)	229 / 323-8	PubMed Citat
Accessing DNA damage in chromatin: insights from transcription.	Meijer, M; Smerdon, M J	Bioessays (1999 Jul)	21 / 596-603	PubMed Citat
Accessing DNA damage in chromatin: Preparing the chromatin landscape for base excision repair.	Rodriguez, Yesenia; Hinz, John M; Smerdon, Michael J	DNA Repair (Amst) (2015 Aug)	32 / 113-9	PubMed Citat
Accommodation and repair of a UV photoproduct in DNA at different rotational settings on the nucleos ...	Svedruzic, Zeljko M; Wang, Chenbo; Kosmoski, Joseph V; Smerdon, Michael J	J Biol Chem (2005 Dec 2)	280 / 40051-7	PubMed Citat
Analysis of DNA repair on nucleosome templates.	Beard, Brian C; Smerdon, Michael J	Methods Enzymol (2004)	377 / 499-507	PubMed Citat
Ascending the nucleosome face: recognition and function of structured domains in the histone H2A-H2B ...	Wyrick, John J; Kyriss, McKenna N M; Davis, William B	Biochim Biophys Acta (2012 Aug)	1819 / 892-901	PubMed Citat
Assays for chromatin remodeling during nucleotide excision repair in <i>Saccharomyces cerevisiae</i> .	Zhang, Ling; Jones, Kristi; Smerdon, Michael J; Gong, Feng	Methods (2009 May)	48 / 19-22	PubMed Citat
Binding of zinc finger protein transcription factor IIIA to its cognate DNA sequence with single UV ...	Kwon, YoungHo; Smerdon, Michael J	J Biol Chem (2003 Nov 14)	278 / 45451-9	PubMed Citat
Bleomycin-induced DNA damage and repair in human cells permeabilized with lysophosphatidylcholine.	Sidik, K; Smerdon, M J	Cancer Res (1990 Mar 1)	50 / 1613-9	PubMed Citat
Changes in nuclear protein acetylation in u.v.-damaged human cells.	Ramanathan, B; Smerdon, M J	Carcinogenesis (1986 Jul)	7 / 1087-94	PubMed Citat
Characterization of biotinylated repair regions in reversibly permeabilized human fibroblasts.	Huijzer, J C; Smerdon, M J	Biochemistry (1992 Jun 2)	31 / 5077-84	PubMed Citat
Chromatin remodelling complex RSC promotes base excision repair in chromatin of <i>Saccharomyces cerevi</i> ...	Czaja, Wioletta; Mao, Peng; Smerdon, Michael J	DNA Repair (Amst) (2014 Apr)	16 / 35-43	PubMed Citat

Chromosomal landscape of UV damage formation and repair at single-nucleotide resolution.	Mao, Peng; Smerdon, Michael J; Roberts, Steven A; Wyrick, John J	Proc Natl Acad Sci U S A (2016 Aug 9)	113 / 9057-62	PubMed Citat
Completion of excision repair in human cells. Relationship between ligation and nucleosome formation ...	Smerdon, M J	J Biol Chem (1986 Jan 5)	261 / 244-52	PubMed Citat
Correlation between repair patch ligation and nucleosome rearrangement in human cells treated with b ...	Sidik, K; Smerdon, M J	Carcinogenesis (1992 Jan)	13 / 135-8	PubMed Citat
Different structural states in oligonucleosomes are required for early versus late steps of base exc ...	Nakanishi, Shima; Prasad, Rajendra; Wilson, Samuel H; Smerdon, Michael	Nucleic Acids Res (2007)	35 / 4313-21	PubMed Citat
Dissecting transcription-coupled and global genomic repair in the chromatin of yeast GAL1-10 genes.	Li, Shisheng; Smerdon, Michael J	J Biol Chem (2004 Apr 2)	279 / 14418-26	PubMed Citat
DNA damage can alter the stability of nucleosomes: effects are dependent on damage type.	Mann, D B; Springer, D L; Smerdon, M J	Proc Natl Acad Sci U S A (1997 Mar 18)	94 / 2215-20	PubMed Citat
DNA polymerase, RNA polymerase and exonuclease activities on a DNA sequence modified by benzo[a]pyre ...	Thrall, B D; Mann, D B; Smerdon, M J; Springer, D L	Carcinogenesis (1992 Sep)	13 / 1529-34	PubMed Citat
DNA repair and the role of chromatin structure.	Smerdon, M J	Curr Opin Cell Biol (1991 Jun)	3 / 422-8	PubMed Citat
DNA repair in a protein-DNA complex: searching for the key to get in.	Kwon, Youngho; Smerdon, Michael J	Mutat Res (2005 Sep 4)	577 / 118-30	PubMed Citat
DNA repair in a small yeast plasmid folded into chromatin.	Smerdon, M J; Bedoyan, J; Thoma, F	Nucleic Acids Res (1990 Apr 25)	18 / 2045-51	PubMed Citat
DNA repair within nucleosome cores of UV-irradiated human cells.	Jensen, K A; Smerdon, M J	Biochemistry (1990 May 22)	29 / 4773-82	PubMed Citat
Effect of histone H1 removal on the distribution of ultraviolet-induced deoxyribonucleic acid repair ...	Smerdon, M J; Watkins, J F; Lieberman, M W	Biochemistry (1982 Aug 3)	21 / 3879-85	PubMed Citat
Effects of nucleosome unfolding on the distribution of UV damage in DNA.	Brown, D W; Libertini, L J; Suquet, C; Small, E W; Smerdon, M J	Ann N Y Acad Sci (1994 Jul 29)	726 / 292-4	PubMed Citat
Enhanced DNA repair synthesis in hyperacetylated nucleosomes.	Ramanathan, B; Smerdon, M J	J Biol Chem (1989 Jul 5)	264 / 11026-34	PubMed Citat
Excision repair of UV damage in human fibroblasts reversibly permeabilized by lysolecithin.	Lorenz, J D; Watkins, J F; Smerdon, M J	Mutat Res (1988 Mar)	193 / 167-79	PubMed Citat
Facilitation of base excision repair by chromatin remodeling.	Hinz, John M; Czaja, Wioletta	DNA Repair (Amst) (2015 Dec)	36 / 91-7	PubMed Citat
Genomic approaches to DNA repair and mutagenesis.	Wyrick, John J; Roberts, Steven A	DNA Repair (Amst) (2015 Dec)	36 / 146-55	PubMed Citat

High-resolution characterization of CPD hotspot formation in human fibroblasts.	Zavala, Anamaria G; Morris, Robert T; Wyrick, John J; Smerdon, Michael J	Nucleic Acids Res (2014 Jan)	42 / 893-905	PubMed Citat
Histone H3 Lys79 methylation is required for efficient nucleotide excision repair in a silenced locu ...	Chaudhuri, Shubho; Wyrick, John J; Smerdon, Michael J	Nucleic Acids Res (2009 Apr)	37 / 1690-700	PubMed Citat
Histone Sprocket Arginine Residues Are Important for Gene Expression, DNA Repair, and Cell Viability ...	Hodges, Amelia J; Gallegos, Isaura J; Laughery, Marian F; Meas, Rithy; Tran, Linh; Wyrick, John J	Genetics (2015 Jul)	200 / 795-806	PubMed Citat
Histone ubiquitylation and its roles in transcription and DNA damage response.	Meas, Rithy; Mao, Peng	DNA Repair (Amst) (2015 Dec)	36 / 36-42	PubMed Citat
Improved method for measuring the ensemble average of strand breaks in genomic DNA.	Bespalov, V A; Conconi, A; Zhang, X; Fahy, D; Smerdon, M J	Environ Mol Mutagen (2001)	38 / 166-74	PubMed Citat
Inhibition of nucleotide excision repair by high mobility group protein HMGA1.	Adair, Jennifer E; Kwon, Youngho; Dement, Gregory A; Smerdon, Michael J; Reeves, Raymond	J Biol Chem (2005 Sep 16)	280 / 32184-92	PubMed Citat
Limited nucleosome migration can completely randomize DNA repair patches in intact human cells.	Arnold, G E; Dunker, A K; Smerdon, M J	J Mol Biol (1987 Jul 20)	196 / 433-6	PubMed Citat
Modulation of DNA damage and DNA repair in chromatin.	Smerdon, M J; Conconi, A	Prog Nucleic Acid Res Mol Biol (1999)	62 / 227-55	PubMed Citat
New vectors for simple and streamlined CRISPR-Cas9 genome editing in <i>Saccharomyces cerevisiae</i> .	Laughery, Marian F; Hunter, Tierra; Brown, Alexander; Hoopes, James; Ostbye, Travis; Shumaker, Taven; Wyrick, John J	Yeast (2015 Dec)	32 / 711-20	PubMed Citat
Nuclease sensitivity of repair-incorporated nucleotides in chromatin and nucleosome rearrangement in ...	Sidik, K; Smerdon, M J	Carcinogenesis (1984 Feb)	5 / 245-53	PubMed Citat
Nucleosome rearrangement in human cells following short patch repair of DNA damaged by bleomycin.	Sidik, K; Smerdon, M J	Biochemistry (1990 Aug 14)	29 / 7501-11	PubMed Citat
Nucleosome rearrangement in vitro. 1. Two phases of salt-induced nucleosome migration in nuclei.	Watkins, J F; Smerdon, M J	Biochemistry (1985 Dec 3)	24 / 7279-87	PubMed Citat
Nucleosome rearrangement in vitro. 2. Formation of nucleosomes in newly repaired regions of DNA.	Watkins, J F; Smerdon, M J	Biochemistry (1985 Dec 3)	24 / 7288-95	PubMed Citat
Nucleosome structure modulates benzo[a]pyrenediol epoxide adduct formation.	Thrall, B D; Mann, D B; Smerdon, M J; Springer, D L	Biochemistry (1994 Mar 1)	33 / 2210-6	PubMed Citat

Nucleosome unfolding during DNA repair in normal and xeroderma pigmentosum (group C) human cells.	Baxter, B K; Smerdon, M J	J Biol Chem (1998 Jul 10)	273 / 17517-24	PubMed Citat
Nucleosomes determine their own patch size in base excision repair.	Meas, Rithy; Smerdon, Michael J	Sci Rep (2016 Jun 06)	6 / 27122	PubMed Citat
Nucleosomes Inhibit Cas9 Endonuclease Activity in Vitro.	Hinz, John M; Laughery, Marian F; Wyrick, John J	Biochemistry (2015 Dec 8)	54 / 7063-6	PubMed Citat
Nucleosomes Selectively Inhibit Cas9 Off-target Activity at a Site Located at the Nucleosome Edge.	Hinz, John M; Laughery, Marian F; Wyrick, John J	J Biol Chem (2016 Nov 25)	291 / 24851-24856	PubMed Citat
Nucleotide excision repair in chromatin and the right of entry.	Gong, Feng; Kwon, Youngho; Smerdon, Michael J	DNA Repair (Amst) (2005 Jul 28)	4 / 884-96	PubMed Citat
Nucleotide excision repair of the 5 S ribosomal RNA gene assembled into a nucleosome.	Liu, X; Smerdon, M J	J Biol Chem (2000 Aug 4)	275 / 23729-35	PubMed Citat
Photofootprint of nucleosome core DNA in intact chromatin having different structural states.	Gale, J M; Smerdon, M J	J Mol Biol (1988 Dec 20)	204 / 949-58	PubMed Citat
Proficient repair in chromatin remodeling defective ino80 mutants of Saccharomyces cerevisiae highli ...	Czaja, Wioletta; Bepalov, Vyacheslav A; Hinz, John M; Smerdon, Michael J	DNA Repair (Amst) (2010 Sep 4)	9 / 976-84	PubMed Citat
Rad23 is required for transcription-coupled repair and efficient overall repair in Saccharomyces ce ...	Mueller, J P; Smerdon, M J	Mol Cell Biol (1996 May)	16 / 2361-8	PubMed Citat
Rad4-Rad23 interaction with SWI/SNF links ATP-dependent chromatin remodeling with nucleotide excisio ...	Gong, Feng; Fahy, Deirdre; Smerdon, Michael J	Nat Struct Mol Biol (2006 Oct)	13 / 902-7	PubMed Citat
Rapid changes in transcription and chromatin structure of ribosomal genes in yeast during growth pha ...	Fahy, Deirdre; Conconi, Antonio; Smerdon, Michael J	Exp Cell Res (2005 May 1)	305 / 365-73	PubMed Citat
Rearrangement of nucleosome structure during excision repair in xeroderma pigmentosum (group A) huma ...	Sidik, K; Smerdon, M J	Carcinogenesis (1987 May)	8 / 733-6	PubMed Citat
Rearrangements of chromatin structure in newly repaired regions of deoxyribonucleic acid in human ce ...	Smerdon, M J	Biochemistry (1983 Jul 5)	22 / 3516-25	PubMed Citat
Reduced Nuclease Activity of Apurinic/Apyrimidinic Endonuclease (APE1) Variants on Nucleosomes: IDEN ...	Hinz, John M; Mao, Peng; McNeill, Daniel R; Wilson 3rd, David M	J Biol Chem (2015 Aug 21)	290 / 21067-75	PubMed Citat
Repair of plasmid and genomic DNA in a rad7 delta mutant of yeast.	Mueller, J P; Smerdon, M J	Nucleic Acids Res (1995 Sep 11)	23 / 3457-64	PubMed Citat
Repair of UV-induced (6-4) photoproducts in nucleosome core DNA.	Suquet, C; Mitchell, D L; Smerdon, M J	J Biol Chem (1995 Jul 14)	270 / 16507-9	PubMed Citat

Repair-independent chromatin assembly onto active ribosomal genes in yeast after UV irradiation.	Conconi, Antonio; Paquette, Michel; Fahy, Deirdre; Bessalov, Vyacheslav A; Smerdon, Michael J	Mol Cell Biol (2005 Nov)	25 / 9773-83	PubMed Citat
Rescue of DNA damage-stalled RNA Pol II: histone H2B in action.	Mao, Peng; Smerdon, Michael J	RNA Dis (2014)	1 /	PubMed Citat
Role of homologous recombination in DNA interstrand crosslink repair.	Hinz, John M	Environ Mol Mutagen (2010 Jul)	51 / 582-603	PubMed Citat
Role of the mammalian SWI/SNF chromatin remodeling complex in the cellular response to UV damage.	Gong, Feng; Fahy, Deirdre; Liu, Hong; Wang, Weidong; Smerdon, Michael J	Cell Cycle (2008 Apr 15)	7 / 1067-74	PubMed Citat
Rotational dynamics of DNA on the nucleosome surface markedly impact accessibility to a DNA repair e ...	Hinz, John M; Rodriguez, Yesenia; Smerdon, Michael J	Proc Natl Acad Sci U S A (2010 Mar 9)	107 / 4646-51	PubMed Citat
Site-specific Acetylation of Histone H3 Decreases Polymerase β Activity on Nucleosome Core Particles ...	Rodriguez, Yesenia; Hinz, John M; Laughery, Marian F; Wyrick, John J; Smerdon, Michael J	J Biol Chem (2016 May 20)	291 / 11434-45	PubMed Citat
Site-specific DNA repair at the nucleosome level in a yeast minichromosome.	Smerdon, M J; Thoma, F	Cell (1990 May 18)	61 / 675-84	PubMed Citat
Sodium butyrate stimulates DNA repair in UV-irradiated normal and xeroderma pigmentosum human fibrob ...	Smerdon, M J; Lan, S Y; Calza, R E; Reeves, R	J Biol Chem (1982 Nov 25)	257 / 13441-7	PubMed Citat
Stability of nucleosome placement in newly repaired regions of DNA.	Nissen, K A; Lan, S Y; Smerdon, M J	J Biol Chem (1986 Jul 5)	261 / 8585-8	PubMed Citat
Strand breaks are repaired efficiently in human ribosomal genes.	Fritz, L K; Suquet, C; Smerdon, M J	J Biol Chem (1996 May 31)	271 / 12972-6	PubMed Citat
Strand-specific modulation of UV photoproducts in 5S rDNA by TFIIIA binding and their effect on TFII ...	Liu, X; Conconi, A; Smerdon, M J	Biochemistry (1997 Nov 4)	36 / 13710-7	PubMed Citat
The amino-terminal tails of histones H2A and H3 coordinate efficient base excision repair, DNA damag ...	Meas, Rithy; Smerdon, Michael J; Wyrick, John J	Nucleic Acids Res (2015 May 26)	43 / 4990-5001	PubMed Citat
The emerging roles of ATP-dependent chromatin remodeling enzymes in nucleotide excision repair.	Czaja, Wioletta; Mao, Peng; Smerdon, Michael J	Int J Mol Sci (2012)	13 / 11954-73	PubMed Citat
The oxidative DNA lesion 8,5'-(S)-cyclo-2'-deoxyadenosine is repaired by the nucleotide excision rep ...	Brooks, P J; Wise, D S; Berry, D A; Kosmoski, J V; Smerdon, M J; Somers, R L; Mackie, H; Spoonde, A Y; Ackerman, E J; Coleman, K; Tarone, R E; Robbins, J H	J Biol Chem (2000 Jul 21)	275 / 22355-62	PubMed Citat
Tight correlation between inhibition of DNA repair in vitro and transcription factor IIIA binding in ...	Conconi, A; Liu, X; Koriazova, L; Ackerman, E J; Smerdon, M J	EMBO J (1999 Mar 1)	18 / 1387-96	PubMed Citat

Transcription, nucleosome stability, and DNA repair in a yeast minichromosome.	Bedoyan, J; Gupta, R; Thoma, F; Smerdon, M J	J Biol Chem (1992 Mar 25)	267 / 5996-6005	PubMed Citat
Ultraviolet damage and nucleosome folding of the 5S ribosomal RNA gene.	Liu, X; Mann, D B; Suquet, C; Springer, D L; Smerdon, M J	Biochemistry (2000 Jan 25)	39 / 557-66	PubMed Citat
Unfolding of nucleosome cores dramatically changes the distribution of ultraviolet photoproducts in ...	Brown, D W; Libertini, L J; Suquet, C; Small, E W; Smerdon, M J	Biochemistry (1993 Oct 12)	32 / 10527-31	PubMed Citat
UV damage to DNA strongly influences its rotational setting on the histone surface of reconstituted ...	Suquet, C; Smerdon, M J	J Biol Chem (1993 Nov 15)	268 / 23755-7	PubMed Citat
UV damage-induced RNA polymerase II stalling stimulates H2B deubiquitylation.	Mao, Peng; Meas, Rithy; Dorgan, Kathleen M; Smerdon, Michael J	Proc Natl Acad Sci U S A (2014 Sep 2)	111 / 12811-6	PubMed Citat
UV induced (6-4) photoproducts are distributed differently than cyclobutane dimers in nucleosomes.	Gale, J M; Smerdon, M J	Photochem Photobiol (1990 Apr)	51 / 411-7	PubMed Citat
UV-Induced DNA Damage and Mutagenesis in Chromatin.	Mao, Peng; Wyrick, John J; Roberts, Steven A; Smerdon, Michael J	Photochem Photobiol (2016 Sep 26)	/	PubMed Citat
UV-induced formation of pyrimidine dimers in nucleosome core DNA is strongly modulated with a period ...	Gale, J M; Nissen, K A; Smerdon, M J	Proc Natl Acad Sci U S A (1987 Oct)	84 / 6644-8	PubMed Citat
UV-induced pyrimidine dimers and trimethylpsoralen cross-links do not alter chromatin folding in vit ...	Gale, J M; Smerdon, M J	Biochemistry (1988 Sep 20)	27 / 7197-205	PubMed Citat
Yeast deubiquitinase Ubp3 interacts with the 26 S proteasome to facilitate Rad4 degradation.	Mao, Peng; Smerdon, Michael J	J Biol Chem (2010 Nov 26)	285 / 37542-50	PubMed Citat